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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,716	08/03/2001	Max Bachmann	ZAHFRI355US	7758

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EXAMINER
PEREZ, GUILLERMO

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/890,716	BACHMANN, MAX	
	Examiner	Art Unit	
	Guillermo Perez	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 25 recites the limitation "Claim 11" in line 1. There is insufficient antecedent basis for this limitation in the claim.

In order to apply the following art rejection, claim 25 has been interpreted as being dependent on claim 24.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by A. M. Harrelson (U. S. Pat. 1,582,019).

Referring to claim 14, A. M. Harrelson discloses an electric machine with:

an external stator (5) and

an inward situated rotor (10) rotatively borne on bearings (33), which possesses:

- a sheet metal (17);
- a laminate rotor pack (10); and
- a rotor shaft (8) rotationally fixed thereto, the rotor shaft (8) is designed as a webbed shaft and exhibits on its circumference a plurality of webs (11) therein characterized in that the webs (11) form small heat transfer surfaces which:
    i. lie on nearly line-like touching surfaces of the laminate rotor pack (10); or
    ii. lie on a provided, hollow, intermediate shaft located between the laminate rotor pack and the rotor shaft.

Referring to claim 14, A. M. Harrelson discloses that the cross-section of the rotor shaft (8) is designed in the shape of a star with four webs (11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over A. M. Harrelson in view of Ruelle et al. (U. S. Pat. 3,590,290).

A. M. Harrelson substantially teaches the claimed invention except that it does not show that the webs are designed in the shape of three sickle shaped webs.

Ruelle et al. disclose that the webs (16) are designed in the shape of three sickle shaped webs (figure 3). The invention of Ruelle et al. has the purpose of providing a better distribution of cooling fluid in the channels of the rotor, which will improve cooling performance.

It would have been obvious at the time the invention was made to modify the machine of A. M. Harrelson and provide it with the sickle shaped webs disclosed by Ruelle et al. for the purpose of providing a better distribution of cooling fluid in the channels of the rotor, which will improve cooling performance.

3. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over A. M. Harrelson in view of M. S. Dunkelberger (U. S. Pat. 2,630,464).

A. M. Harrelson substantially teaches the claimed invention except that it does not show that the webs are in the form of diffuser blades.

M. S. Dunkelberger discloses that the rotor shaft (28) possesses webs (42), which are in the form of diffuser blades (figure 6). M. S. Dunkelberger's invention has the purpose of avoiding the temperature during normal operation to rise to levels that might be deleterious to the machine.

It would have been obvious at the time the invention was made to modify the machine of A. M. Harrelson and provide it with the webs configuration disclosed by M. S. Dunkelberger for the purpose of avoiding the temperature during normal operation to rise to levels that might be deleterious to the machine.

4. Claims 18, 20, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over A. M. Harrelson in view of Potter et al. (U. S. Pat. 3,562,564).

A. M. Harrelson substantially teaches the claimed invention except that it does not show that the rotor shaft was designed in the form of a screw conveyor. A. M. Harrelson does not disclose that the rotor shaft is force fit into a hollow interposed shaft, that is, the rotor laminate pack.

Potter et al. disclose that the rotor shaft (17) was designed in the form of a screw conveyor (20). The invention of Potter et al. has the purpose of improving heat dissipation for the diodes, by providing a fluid path connecting the diodes heat sink with the rotor shaft, and an exterior fluid heat dissipator.

It would have been obvious at the time the invention was made to modify the machine of A. M. Harrelson and provide it with shaft configuration disclosed by Potter et al. for the purpose of improving overall heat dissipation of the machine.

Referring to claim 20, no patentable weight has been given to the method of manufacturing limitations (i. e. "force fit into") since "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe,* 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over A. M. Harrelson in view of Lulay (DE 2655573).

A. M. Harrelson substantially teaches the claimed invention except that it does not show that the webs are interrupted and do not lie over their composite length on the interposed shaft, which is to say, the rotor laminate pack.

Lulay discloses that the webs (2) are interrupted and do not lie over their composite length on the interposed shaft, which is to say, the rotor laminate pack (5). Lulay's invention has the purpose of providing heat dissipation in the circumferential as well as in the axial rotor direction.

It would have been obvious at the time the invention was made to modify the machine of A. M. Harrelson and provide it with the web configuration disclosed by Lulay for the purpose of providing heat dissipation in the circumferential as well as in the axial rotor direction.

6. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over M. Harrelson in view of Scherzinger et al. (U. S. Pat. 4,943,746).

A. M. Harrelson substantially teaches the claimed invention except that it does not show that the rotor shaft is made from a material of poor heat conductivity. A. M. Harrelson does not disclose that the material of poor heat conductivity is a highly alloyed steel. A. M. Harrelson does not disclose that the material of poor heat conductivity is titanium.

Scherzinger et al. disclose that the rotor shaft is made from a material of poor heat conductivity. Scherzinger et al. disclose that the material of poor heat conductivity

is a highly alloyed steel. Scherzinger et al. disclose that the material of poor heat conductivity is titanium (column 6, lines 20-26). The invention of Scherzinger et al. has the purpose of improving heat dissipation in the dynamoelectric machine.

It would have been obvious at the time the invention was made to modify the machine of A. M. Harrelson and provide it with the materials disclosed by Scherzinger et al. for the purpose of improving heat dissipation in the dynamoelectric machine.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
December 28, 2002

NESTOR RAMIREZ
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